

20 corresponding to said optical receiving circuits, and
individually outputs the separated optical signals from the n
output ports, and

each of said optical receiving circuits includes an optical
receiver for converting the optical signal outputted from the
25 output port corresponding thereto of said wavelength separator
into the electrical signal, and intermittently outputting the
electrical signal.

3. The optical communication apparatus according to claim
1, wherein

each of said optical transmitting circuits includes
a carrier modulator for modulating a carrier having
5 a frequency unique to each of said optical transmitting circuits
with the intermittent input signal to generate a burst modulated
signal, and intermittently outputting the burst modulated signal,
and

a variable wavelength optical modulator for
10 converting the burst modulated signal from said carrier modulator
into a burst optical signal, setting a wavelength thereof to any
one of n predetermined varying wavelengths corresponding to said
optical receiving circuits, and intermittently sending the burst
optical signal,

15 said optical transfer circuit includes

an optical multiplexer for multiplexing the burst

optical signals outputted from said optical transmitting circuits,
and intermittently outputting a multiplexed optical signal;

20 a wavelength separator for separating the
multiplexed optical signal inputted from said optical multiplexer
into optical signals of the predetermined wavelengths
corresponding to said optical receiving circuits, and
individually outputting the separated optical signals from the
n output ports, and

25 each of said optical receiving circuits includes

an optical receiver for converting the optical signal
outputted from the output port corresponding thereto in said
wavelength separator into an electrical signal, and
intermittently outputting the electrical signal,

30 a filter for receiving the electrical signal
intermittently outputted from said optical receiver, selectively
passing any one of said burst modulated signals from said m optical
transmitting circuits based on the received electrical signal,
and outputting the passed burst modulated signal, and

35 a burst demodulator for demodulating the burst
modulated signal intermittently outputted from said filter.

4. The optical communication apparatus according to claim
3, further comprising an optical sub-transmitting circuit,
wherein

said optical sub-transmitting circuit includes

5 a carrier generator for multiplexing reference carriers that are equal in frequency to and have a predetermined relation in phase with the carriers unique to said optical transmitting circuits, and outputting a multiplexed signal,

 an optical sub-modulator for converting the
10 multiplexed signal outputted from said carrier generator into an optical signal having a predetermined wavelength that is different from said n predetermined varying wavelengths corresponding to said optical receiving circuits, and sending the optical signal,

15 said optical multiplexer multiplexes the burst optical signals outputted from said optical transmitting circuits and the optical signal outputted from said optical sub-transmitting circuit, and outputs a multiplexed optical signal,

 said wavelength separator separates the multiplexed
20 optical signal outputted from said optical multiplexer into optical signals for each of the predetermined wavelengths corresponding to said n optical receiving circuits and an optical signal having a wavelength equal to the wavelength of the optical signal sent from said optical sub-modulator, and individually
25 outputs the separated optical signals from the n output ports and a carrier output port provided thereto,

 each of said optical receiving circuits further includes

 an optical sub-receiver for converting the optical signal outputted from the carrier output port of said wavelength

frequency unique to each of said optical transmitting circuits
5 to generate the burst modulated signal and intermittently outputs
the burst modulated signal and the carrier,

each of said optical transmitting circuits further includes
an optical sub-modulator for converting the carrier outputted
from said carrier modulator into an optical signal having a
10 predetermined wavelength that is different from n predetermined
varying wavelengths corresponding to said optical receiving
circuits, and sending the optical signal,

said optical multiplexer multiplexes the burst optical
signals from variable wavelength optical modulator included in
15 each of said optical transmitting circuits and the optical signal
from said optical sub-modulator, and outputs a multiplexed
optical signal,

said wavelength separator separates the multiplexed
optical signal outputted from said optical multiplexer into
20 optical signals for each of the predetermined wavelengths
corresponding to said n optical receiving circuits and an optical
signal having a wavelength equal to the wavelength of the optical
signal sent from said optical sub-modulator, and individually
outputs the separated optical signals from the n output ports and
25 a carrier output port provided thereto,

each of said optical receiving circuits further includes
an optical sub-receiver for converting the optical
signal outputted from the carrier output port of said wavelength

a monitor for monitoring the electrical signal outputted from said
5 optical receiver to determine whether the burst modulated signal
from each of said optical transmitting circuits is present or not,
and, if present, controls said filter to selectively passing a
predetermined burst modulated signal for output.

11. The optical communication apparatus according to
claim 3, wherein

said filter and said burst demodulator are provided as many
as the m optical transmitting circuits in each of said optical
5 receiving circuits, and

each of said filters selectively passes a different one of
the burst modulated signals from said m optical transmitting
circuits, and intermittently outputs the passed burst modulated
signal.